

February 15, 2013

**Summary of Santa Ana Delhi Channel UAA as described in January 12, 2012 Staff Report  
(Section 5.6.3, [UAA Analysis Santa Ana-Delhi Channel](#)) and [CDM UAA Technical Report for Santa  
Ana-Delhi Channel](#)**

[Note: The Regional Board staff report UAA sections utilize, in part, technical information presented in the CDM UAA technical report for each of the UAA waters. To the extent feasible, the technical information in the CDM reports was summarized/reiterated in the Regional Board staff reports to minimize the need for readers to review both reports. However, the CDM reports include additional photographs and figures that were not included in the Regional Board staff reports because of file size considerations. These additional photographs/figures are referenced as needed in the Regional Board staff reports, and in the summary below.

To avoid confusion, please note further that in some cases, the reach designations differ slightly between the Regional Board reports and CDM's reports. (Regional Board staff recommended slight revisions of CDM's approach, which was initiated first, based on review of applicable data and information.) References in the summary below to figures in the CDM reports as applicable to specific reaches are based on the Regional Board's reach designation scheme.]

### Summary of UAAs Santa Ana-Delhi Channel (Continued)

SANTA ANA-DELHI CHANNEL	REC1	REC2	40 CFR 131.10(g) Factors	
			131.10(g)(2) Low Flow	131.10(g)(4) Hydrologic Modifications
Tidal Prism	u	X	Tidal variation. At Bicycle Bridge (downstream terminus of prism): depth to 7.5 ft.; Upstream section at 1038 ft. from Bicycle Bridge: low tide depth to < 1 ft. (RB staff observation).	Earthen bottom and steep earthen sides on east side; concrete and earthen on west slope of channel. Channel length 1038 ft.
Reach 1	u	u	Depth < 2 ft. 95% of time, < 1 ft. 90% of time. Depth observed by RB Staff to be 1 ft or less and contained to low flow channel.	Concrete vertical wall channel 3.19 miles in length; includes ~ 1 mi. enclosed box culverts. Most downstream 0.25 mile earthen with concrete trapezoidal west slope.
Reach 2	u	X	6 inches or less as observed by RB staff.	0.9 mile earthen trapezoidal channel w/rip-rap; 0.55 mile concrete vertical wall channel.
<b>Representative Photographs</b>				
Tidal Prism	Figure SAD-3 in Section 5.6.3 UAA Analysis SAD; Figure 2-13 of CDM UAA Technical Report SAD			
Reach 1	Figure SAD-4 in Section 5.6.3 UAA Analysis SAD; Figure 2-14, 2-15, 2-16, 2-17, 2-18, 2-19, 2-20, 2-21, 2-22 in the CDM UAA Technical Report SAD			
Reach 2	Figure SAD-5 in Section 5.6.3 UAA Analysis SAD; Figure 2-23, 2-24, 2-25 in the CDM UAA Technical Report SAD.			

u REC1 and/or REC2 are not attainable uses as determined by UAA.

X Existing or Potential Beneficial Use

### Summary of UAAs Santa Ana-Delhi Channel (Continued)

<b>Nature of Flows</b>  (see Section 5.6.3 UAA Analysis SAD: 5.6.3.4 “Flow Conditions and Water Levels”)	
<b>Tidal Prism</b>	<b>Tidal flows from adjacent Upper Newport Bay dominate lower half of tidal prism. Low flows (less than one ft deep) of urban nuisance flows and groundwater occur during low tide in upper section. No POTW flows</b>
<b>Reaches 1,2</b>	<b>Low flows consist of groundwater and urban nuisance flows. No POTW flows.</b>
<b>Water Quality Conditions</b>  (See Section 5.6.3 UAA Analysis SAD: 5.6.3.7. “Water Quality Conditions” and Appendices 1 and 2.)	
<b>Water quality data show that there has been no consistent compliance with REC1 objectives.</b>	
<b>Evidence of Use Investigations</b> (See Section 5.6.3. UAA Analysis SAD: 5.6.3.8 “Recreation Use Surveys”)	
<b>1. Field Observation:</b> <ul style="list-style-type: none"> <li>a. SWQSTF member surveys: July/August 2006 and July/August 2011.               <ul style="list-style-type: none"> <li>i. No REC1 or REC2 activity observed.</li> </ul> </li> <li>b. Channel maintenance personnel communications               <ul style="list-style-type: none"> <li>i. No REC1 or REC2 activity reported.</li> </ul> </li> <li>c. Weekly observations made in coordination with remote camera maintenance               <ul style="list-style-type: none"> <li>i. No REC1 or REC2 activity observed.</li> </ul> </li> </ul>	

## **Summary of UAAs Santa Ana-Delhi Channel – Evidence of Use Investigations (Continued)**

### **2. Photographic Evidence:**

(Table below excerpted from Section 5.6.3. UAA Analysis SAD)

**Table SAD-3**  
**Recreational Use Survey Duration and Number of Images Collected**

<b>Survey Location</b>	<b>Start Date</b>	<b>End Date</b>	<b>Number of Images</b>
Upper Newport Bay	6/20/2005	6/6/2006	20,203
Mesa Drive	6/20/2005	7/13/2006	21,284
Sunflower Avenue	7/7/2005	7/9/2006	20,978

Note that the Upper Newport Bay photo location is immediately downstream of the terminus of the Santa Ana-Delhi Channel tidal prism in the Upper Newport Bay Ecological Reserve. The lack of water contact observed (see next table below) at this easily accessible location is indicative of the expected degree of contact at the tidal prism terminus. The Mesa Drive survey location is in Reach 1; the Sunflower Avenue location is at the downstream terminus of Reach 2.

### Summary of UAAs Santa Ana-Delhi Channel (Continued)

(Table below excerpted from Section 5.6.3 UAA Analysis SAD)

<b>Table SAD-4 Recreational Activity Recorded for the Santa Ana-Delhi Channel</b>					
Location	Number of Individuals			Estimated Duration (min)	Type of Activity
	Total	Dry Season	Wet Season		
Upper Newport Bay	38	34	4	1,170	Walking, Sitting, Boating
Mesa Drive	6	4	2	180	Walking, Bicycling
Sunflower Avenue	7	4	3	210	Walking

**Notes on Table SAD-4:** Observations of individuals walking/bicycling or sitting were of individuals not in contact with the water. A possible exception was one observation at Sunflower Avenue (see Figure SAD-15, below, which shows a young adult standing in the channel; it is not clear whether there was any hand contact with water).

**Conclusion:** No photographic evidence of REC1 activity within the Santa Ana-Delhi Channel; very limited REC2 activity that did not entail physical contact with the water (w/possible exception shown in Fig. SAD-15).

#### Control Measure Implementation

**1) Established Regulatory Framework:**

a) MS4 permit (and general statewide industrial/construction permits) for Orange County. Include:

- i) Requirements to implement BMPs to assure that applicable standards in receiving waters are achieved.
- ii) Requirements include investigations to identify/correction of illicit connections to the MS4 system (may be a pathogen/pathogen indicator source).
- b) Newport Bay fecal coliform TMDL: source investigations required to determine sources; corrective action required to meet TMDL [note: the Santa Ana-Delhi Channel is one tributary to the Bay; San Diego Creek is the major tributary. Corrective action in the Santa Ana-Delhi Channel alone will not assure that standards are met in the Bay].
- 2) Planned diversion of dry weather flows in the Santa Ana-Delhi Channel (~ at downstream terminus of Reach 1).

#### **Other Factors Considered**

- 1. **Access and Safety** (Section 5.6.3 UAA Analysis SAD, 5.6.3.5)
  - a. Tidal prism, Reach 1, Reach 2: All fenced (six-foot); maintenance access gates locked.
    - i. Channel considered unsafe for public access
- 2. **Adjacent Land Use (including proximity to other recreational sites)** (Section 5.6.3 UAA Analysis SAD, 5.6.3.6; Figure SAD-10)
  - a. Tidal prism: office complex and residences; golf course; Upper Newport Bay Ecological Reserve; equestrian area
  - b. Reach 1: Commercial/industrial urban uses predominate; residences/golf courses in lower section; ~ 0.3 mile bicycle trail (separated from channel by fence). Channel is largely out of view due to adjacent fencing, structures.
  - c. Reach 2: residences/businesses/elementary school, intermediate school

The Santa Ana Delhi Channel is tributary to Upper Newport Bay. Both Lower Newport Bay and Pacific Ocean coastal waters are in close proximity and are heavily used for primary contact recreation. The proximity of these areas and restrictions on access to/physical conditions of the Santa Ana-Delhi Channel make REC1 activity in the Channel extremely unlikely.

**In addition to the results of field and photographic surveys, adjacent land use, channel morphology, accessibility and fencing or other barriers to viewing the channel (such as vegetative cover) were considered in recommendations regarding REC2 designations. Based on this evidence, the tidal prism and Reach 2 of the Channel are designated REC2 per the recreation standards amendments. However, because a significant portion of Reach 1 is blocked from view by fencing/vegetation, runs adjacent to industrial/commercial development or is enclosed in underground culverts, the REC2 designation was found inappropriate for this Reach. Observations of individuals in or adjacent to this Reach were very limited (6 individuals walking or bicycling out of 21,284 images recorded.)**

**Representative Photographs of the Santa Ana-Delhi Channel from the UAA Analysis SAD (January 12, 2012 staff report) and the CDM UAA Technical Report SAD.**



Figure SAD-2 Santa Ana-Delhi Channel, Tidal Prism Segment. (UAA Analysis SAD)

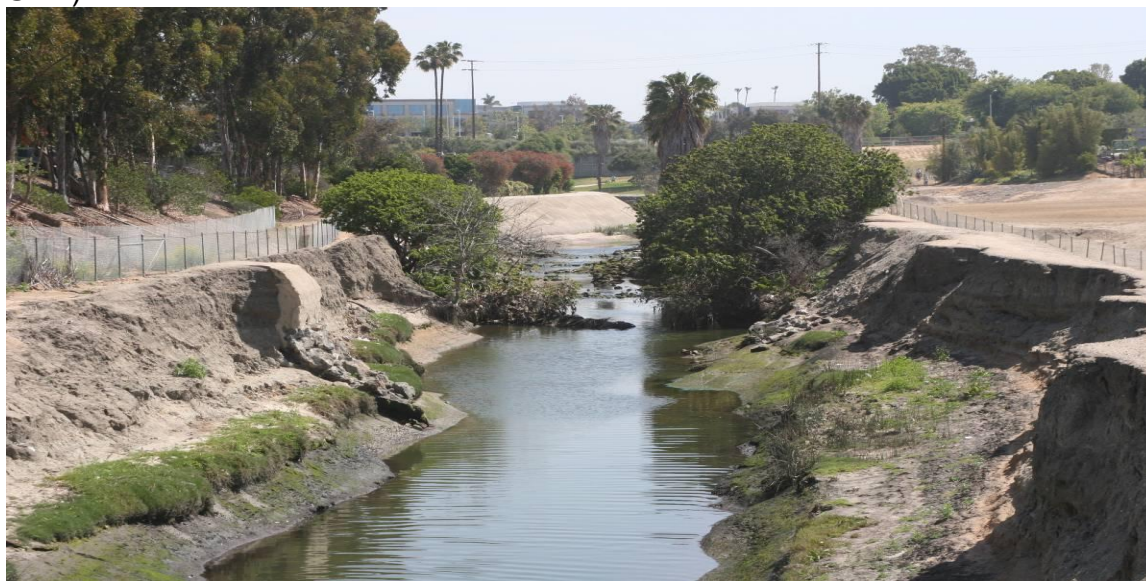


Figure SAD-3. Tidal Prism Segment, looking upstream from Bicycle Bridge. (UAA Analysis SAD). REC2 use is existing or potential, REC1 use is not attainable.





Figure 2-13 (April 2009) Tidal Prism Segment looking upstream from Bicycle Bridge. (CDM UAA Technical Report SAD)



Figure 2-14 (April 2009) Reach 1 looking downstream from Mesa Ave, Newport Beach, into earthen bottom section which contains a concrete slope on west bank. The earthen section of Reach 1 is about 0.20 mile in length and is the most downstream section of Reach 1. This site was a photo REC Use Survey location. (CDM UAA Technical Report SAD)





Figure 2-16. Reach 1, In the City of Costa Mesa just south of SE Bristol St. (April 2009) (CDM UAA Technical Report SAD). REC1&REC2 uses are not attainable.



Figure 2-18. Reach 1, located in the City of Santa Ana. (April 2009) (CDM UAA Technical Report SAD).





Figures 2-24 and 2-25. Reach 2, Santa Ana-Delhi Channel, rip rap and concrete box sections located in the city of Santa Ana. The rip-rap section is 0.9 mile in length while the vertical concrete section is 0.55 mile in length. (CDM UAA Technical Report SAD)



Figure SAD-15, Reach 2. Photo of activity at the Photo REC Use Survey Location on the Santa Ana-Delhi Channel at Sunflower Avenue in the City of Santa Ana. (In the January 12, 2012 Staff Report, Figure SAD-15 was mislabeled as being at Mesa Drive.) This is the only image out of almost 21,000 photos taken at this location during the digital camera REC survey of anyone close to the water. REC2 use is considered existing or potential, REC1 use is considered not attainable. (UAA Analysis SAD)